

REMARKS

In the Official Action, the Examiner rejected claims 1-15, 21-25, and 29-34 and objected to claims 16-20 and 26-28. However, the Examiner also indicated claims 16-20 and 26-28 as allowable if rewritten in independent form. In this Amendment and Response, the Applicants canceled claims 15, 16, 25, and 26 and amended claims 1, 7, 17, 18, 20, 24, 27, and 31 to clarify certain features and to expedite allowance of the present application in accordance with the subject matter indicated as allowable. The Applicants also added new claims 52-63 to further clarify unique features of the present application. No new matter has been added by these amendments. Applicants respectfully request reconsideration and allowance of the pending claims in view of the foregoing amendment and the following remarks.

Claim Rejections – 35 U.S.C. § 102

The Examiner rejected claims 1, 3-6, 11-12, 15, 24-25, 29-30, and 34 under U.S.C. § 102(b) as anticipated by Jackson, U.S. Patent No. 4,290,181. Applicants respectfully traverse this rejection. As noted above, the Examiner indicated claims 16-20 and 26-28 as allowable if rewritten in independent form. To expedite allowance of the present application, the Applicants amended independent claims 1 and 24 to incorporate the features recited by dependent claims 16 and 26, respectively. In view of these amendments, the foregoing rejection is moot. Therefore, the Applicants respectfully request the Examiner withdraw the rejection of claims 1, 3-6, 11-12, 15, 24-25, 29-30, and 34 under 35 U.S.C. § 102.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 2, 21-23, and 33

The Examiner rejected dependent claims 2, 21-23, and 33 under 35 U.S.C. § 103(a) as obvious over Jackson in view of Runyan et al., U.S. Patent No. 4,430,285. Applicants respectfully traverse this rejection. These claims all depend from one of the independent claims 1 and 24. As noted above, the Applicants amended independent claims 1 and 24 to incorporate the features recited by dependent claims 16 and 26, which the Examiner indicated as allowable.

Accordingly, the foregoing rejection is moot. Therefore, the Applicants respectfully request the Examiner withdraw the rejection of claims 2, 21-23, and 33 under 35 U.S.C. § 103.

Claims 7-10 and 31-32

The Examiner also rejected claims 7-10 and 31-32 under 35 U.S.C. § 103(a) as obvious over Jackson in view of Borgen et al., U.S. Patent No. 4,430,285. Applicants respectfully traverse this rejection.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). If the Examiner combines the teachings of the prior art to produce the claimed invention, a *prima facie* case of obviousness cannot be established absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

The Applicants respectfully traverse these rejections for the following reasons. First, as discussed in detail below, the cited references do not teach or suggest certain features recited by the present claims. Specifically, independent claim 7 recites, *inter alia*, "creating a temperature differential in which the *studded ball is hotter than the desired structure*." Similarly, dependent claim 31 recites, *inter alia*, "a temperature differential in which the *support structure is cooler than the studded ball*." Neither the Jackson reference nor the Borgen et al. reference teaches such temperature differentials. Second, the Examiner has not provided a valid suggestion or

motivation to combine the references. Third, the Borgen et al. reference teaches away from the Jackson reference and the present application.

First, the Examiner acknowledged that Jackson "does not show the claimed step of creating a temperature differential between the housing structure and the ball stud." Paper No. 4, Page 5. In view of the deficiencies of Jackson, the Examiner turned to Borgen et al. for a teaching of "preheating a housing structure and force fitting the structure around a ball stud." *Id.* However, the Borgen et al. reference does not teach creating a temperature differential in which the studded ball is hotter than the desired structure or the support structure is cooler than the studded ball. Instead, the Borgen et al. reference teaches a "preheated socket ... and a melt-in-place plastic socket liner which melts on forced contact with the heated socket." See Abstract. The remaining references also fail to obviate the deficiencies of Jackson and Borgen et al. Accordingly, independent claim 7 and its respective dependent claims 8-10 are believed to be patentable over the cited references. Similarly, dependent claim 31 and its respective dependent claim 32 are believed to be patentable over the cited references.

Second, the Applicant emphasizes the lack of any motivation or suggestion to combine the references. In the Office Action, the Examiner stated:

It would have been obvious to one of ordinary skill in the art to create a temperature differential as shown in the added reference, when performing the process set forth in the primary reference, for forming a structure with a tight fit.

Paper No. 4, Page 5. Applicants first stress that the Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). In the present rejection, the Examiner combined the Jackson and Borgen et al. references based on the *conclusory and subjective statement* that the preheated housing of Borgen et al. *could* provide a tight fit of the ball and socket of Jackson, yet the Examiner provided no reasoning as to why such a combination would or could be made. Accordingly, Applicant challenges the Examiner to produce objective evidence supporting the Examiner's alleged reason to combine the cited references.

Even if objective evidence is identified to support the Examiner's alleged reason to combine the references, the Applicant submits that one of ordinary skill in the art would not be motivated to combine the Jackson and Borgen et al. references. The Examiner's alleged reason to combine the references completely ignores the incompatibilities between Jackson and Borgen et al. Specifically, Jackson teaches injection molding, whereas Borgen teaches press fitting. While preheating the socket of Borgen et al. facilitates the *press fitting* of the ball and socket, the same does not necessarily follow for the *injection molding* process of Jackson. There is no basis for concluding that an invention would have been obvious solely because it is a combination of elements that were known in the art at the time of the invention. *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1356, 51 U.S.P.Q.2d 1415, 1420-21 (Fed. Cir. 1999). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Moreover, a statement that the proposed modification would have been "well within the ordinary skill of the art" based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some *objective reason to combine* the teachings of the references. *Ex parte Levensgood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999). The Examiner clearly *speculated* about the possibility of combining the reference without providing any objective evidence. Again, the Applicant challenges the Examiner to provide *objective evidence* of the requisite suggestion or motivation to combine or modify the references.

Third, the Examiner ignored the disclosure of Borgen et al., which clearly *teaches away* from a combination with the Jackson reference and the present application. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. The Applicant further emphasizes that if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); see M.P.E.P. § 2143.01.

Turning to the cited references, Jackson teaches injection molding whereas Borgen et al. teach "a wider tolerance socket housing and an oversized preformed plastic socket liner which *melts* into the housing to achieve a tight fit." See Col. 1, lines 18-22. As noted above, injection molding and press-fitting processes operate on much different principles, which are not compatible with one another. Moreover, the Borgen et al. reference does not teach creating a temperature differential in which the studded ball is hotter than the desired structure or the support structure is cooler than the studded ball, as recited by claims 7 and 31. If the socket housing of Borgen et al. was cooler than the socket liner, then it would be inoperable for its intended purpose. Similarly, if the socket liner of Borgen et al. was hotter than the socket housing, then it would be inoperable for its intended purpose. Accordingly, one of ordinary skill in the art would be discouraged from combining the *injection molding* process of Jackson with the *press-fitting* process of Borgen et al. In view of the foregoing, the Applicants respectfully request the Examiner to withdraw the proposed combination of Jackson and Borgen et al.

In addition, claims 31-32 both depend from independent claim 24. As noted above, the Applicants amended claim 24 to incorporate the features recited by dependent claims 16 and 26, which the Examiner indicated as allowable. Accordingly, the foregoing rejection is moot.

Therefore, the Applicants respectfully request the Examiner withdraw the rejection of claims 7-10 and 31-32 under 35 U.S.C. § 103.

New Claims

The Applicants added new claims 52-63 to further clarify unique features of the present application. No new matter has been added by these amendments. Specifically, independent claim 52 recites, *inter alia*, "centering a studded ball" and "positionally centering a desired structure." In view of the subject matter indicated as allowable in the present Office Action, independent claim 52 and its respective dependent claims 53-58 are believed to be in condition for allowance. Regarding the remaining claims, independent claim 59 recites, *inter alia*, "creating a temperature differential in which the *temperature of the studded ball is greater than*

the temperature of the socket." As discussed above, the cited references do not teach or suggest, alone or in combination, such a temperature profile as applied to molding. Accordingly, independent claim 59 and its respective dependent claims 60-63 are believed to be in condition for allowance.

Authorization for Extensions of Time and Payment of Fees

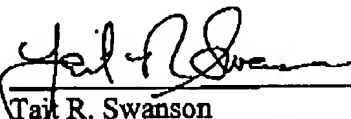
In accordance with 37 C.F.R. § 1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof. The Commissioner is authorized to charge the requisite fee of \$84 for additional claims, and any additional fees which may be required, to the credit card listed on the attached PTO-2038. However, if the PTO-2038 is missing, if the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge Deposit Account No. 06-1315; Order No. ITWO:0015/YOD.

Conclusion

The Applicants respectfully submit that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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